

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

The specification and abstract have been reviewed and revised to make a number of editorial revisions thereto. Further, the abstract has been revised so as to address the objection thereto. A substitute specification and abstract including the revisions have been prepared and are submitted herewith. No new matter has been added by the revisions. As a result, withdrawal of the objection to the abstract is respectfully requested.

Enclosed herewith is a replacement Figure 26 labeled as "Prior Art." No new matter has been added by this amendment to Figure 26. As a result, withdrawal of the objection to Figure 26 is respectfully requested.

Claims 1-3 and 9 have been provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claim 8 of copending Application No. 10/130,694 in view of the admitted prior art (APA) and claim 1 of copending Application No. 10/149,309 in view of APA.

Claims 3-10 have been canceled without prejudice or disclaimer to the subject matter contained therein. Further, claims 1 and 2 have been amended so as to further distinguish the present invention from the references relied upon in the above-mentioned obviousness-type double patenting rejections. As a result, it is submitted that the rejections are no longer applicable for the following reasons.

Claim 1 is patentable over the combination of claim 8 of Application No. 10/130,694 and APA, and the combination of claim 1 of Application No. 10/149,309 and APA, since claim 1 recites a signal transmitter including a time-base compression means for time-base-compressing an audio signal employing a video sampling clock, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, employing a multiplexing control signal generated based on a horizontal synchronizing signal or a vertical synchronizing signal, outputting a video/audio multiplexed signal via a data line, and outputting the multiplexing control signal via a transmission line different from the data line. Neither of the above-mentioned combinations discloses or suggests these features of claim 1.

Regarding the first combination, claim 8 of Application No. 10/130,694 recites a signal transmission apparatus including a time-base compression means that time-base-compresses an

audio signal. The signal transmission apparatus also includes a signal multiplexing means that time-division-multiplexes a video signal, a control signal, and the time-base-compressed audio signal and transmits the multiplexed signal to a signal reception apparatus through a transmission path. While claim 8 does recite the time-base compression means for time-base compressing the audio signal, it is apparent that claim 8 does not recite that the time-base-compression employs a video signal clock as is recited in claim 1 of the present application. Further, although the signal multiplexing means recited in claim 8 outputs the multiplexed signal through a transmission path, claim 8 does not recite that the signal multiplexing means outputs the multiplexed signal via a data line, and outputs a multiplexing control signal via a transmission line different from the data line.

As for APA, it is relied upon in the rejection as disclosing a multiplexing control signal generator for generating a multiplexing control signal. However, it is apparent that APA fails to disclose or suggest the above-discussed features of claim 1. As a result, the combination of claim 8 of Application No. 10/130,694 and APA fails to render claim 1 obvious.

Regarding the second combination, claim 1 of Application No. 10/149,309 recites a signal transmission apparatus including a time-base compression unit for compressing an audio signal. The signal transmission apparatus also includes a multiplexing unit for multiplexing a video signal, a control signal, and the time-base-compressed audio signal to output a video-audio-control signal to the outside. While claim 1 of Application No. 10/149,309 does recite the time-base compression unit for compressing the audio signal, it is apparent that claim 1 does not recite that the compression employs a video signal clock as is recited in claim 1 of the present application. Further, although the multiplexing unit recited in claim 1 outputs the video-audio-control signal to the outside, claim 1 does not recite that the multiplexing unit outputs a multiplexed signal via a data line, and outputs the multiplexing control signal via a transmission line different from the data line.

As for APA, it is relied upon in the rejection as disclosing the multiplexing control signal generator for generating the multiplexing control signal. However, it is apparent that APA fails to disclose or suggest the above-discussed features of claim 1. As a result, the combination of claim 1 of Application No. 10/149,309 and APA fails to render claim 1 obvious.

Claim 2 is patentable over the combination of claim 8 of Application No. 10/130,694 and APA, and the combination of claim 1 of Application No. 10/149,309 and APA, since claim 2

recites a signal transmitter including a time-base compression means for time-base-compressing an audio signal employing a video sampling clock, a multiplexing control signal generator for generating a multiplexing control signal which provides a no-signal period between the time-base compressed audio signal and a video signal, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, employing the multiplexing control signal, and outputting a video/audio multiplexed signal via a data line. Neither of the above-mentioned combinations discloses or suggests these features of claim 2.

Regarding the first combination, it is apparent that the combination fails to disclose or suggest the time-base compression means for time-base-compressing an audio signal employing a video sampling clock, as discussed above in support of claim 1. Further, although claim 8 of Application No. 10/130,694 recites that the multiplexing means time-division-multiplexes the video signal and the time-base-compressed audio signal with the control signal, it is apparent that the control signal of claim 8 is not recited as providing a no-signal period between the time-base compressed audio signal and the video signal.

As for APA, it is relied upon in the rejection as disclosing the multiplexing control signal generator for generating a multiplexing control signal. However, it is apparent that APA fails to disclose or suggest the above-discussed features of claim 2. As a result, the combination of claim 8 of Application No. 10/130,694 and APA fails to render claim 2 obvious.

Regarding the second combination, it is apparent that the combination fails to disclose or suggest the time-base compression means for time-base-compressing an audio signal employing a video sampling clock, as discussed above in support of claim 1. Further, although claim 1 of Application No. 10/130,694 recites that the multiplexing unit multiplexes the video signal and the time-base-compressed audio signal with the control signal, it is apparent that the control signal of claim 1 is not recited as providing a no-signal period between the time-base compressed audio signal and the video signal.

As for APA, it is relied upon in the rejection as disclosing the multiplexing control signal generator for generating a multiplexing control signal. However, it is apparent that APA fails to disclose or suggest the above-discussed claimed features of claim 2. As a result, the combination of claim 1 of Application No. 10/130,694 and APA fails to render claim 2 obvious.

Claims 1-3 and 9 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Matsunaka (JP 06-078280). This rejection is submitted to be inapplicable to the pending claims for the following reasons.

Claim 1 is patentable over the combination of APA and Matsunaka, since claim 1 recites a signal transmitter including a time-base compression means for time-base-compressing an audio signal employing a video sampling clock, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, employing a multiplexing control signal generated based on a horizontal synchronizing signal or a vertical synchronizing signal, outputting a video/audio multiplexed signal via a data line, and outputting the multiplexing control signal via a transmission line different from the data line. The combination of APA and Matsunaka fails to disclose or suggest these features of claim 1.

APA discloses a signal transmission system including TMDS encoders/serializers 2601-2603 for TMDS-encoding component signals, serializing the encoded signals, and outputting the serialized signals to transmission lines. The TMDS encoders/serializers 2601-2603 also receive a data enable (DE) signal indicating when the component signals are present.

In the rejection, it is admitted that APA fails to disclose or suggest the time-base compression means recited in claim 1. However, it is apparent that APA also fails to disclose or suggest the signal multiplexing means for multiplexing the time-base-compressed audio signal and the video signal, employing the multiplexing control signal generated based on the horizontal synchronizing signal or the vertical synchronizing signal, outputting the video/audio multiplexed signal via a data line, and outputting the multiplexing control signal via a transmission line different from the data line. The TMDS encoders/serializers 2601-2603 of APA do not perform these operations.

As for Matsunaka, it discloses a transmission section T that is capable of applying time-base compression to a digital audio signal and combine the compressed audio signal with a digital video signal. (See abstract) However, Matsunaka fails to disclose or suggest that the transmission section T employs a video sampling clock. Further, Matsunaka fails to disclose or suggest that the transmission section T employs a multiplexing control signal generated based on a horizontal synchronizing signal or a vertical synchronizing signal, outputs the video/audio multiplexed signal via a data line, and outputs the multiplexing control signal via a transmission

line different from the data line. As a result, claim 1 is patentable over the combination of APA and Matsunaka.

Claim 2 is patentable over the combination of APA and Matsunaka, since claim 2 recites a signal transmitter including a time-base compression means for time-base-compressing an audio signal employing a video sampling clock, a multiplexing control signal generator for generating a multiplexing control signal which provides a no-signal period between the time-base compressed audio signal and a video signal, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, and a signal multiplexing means for multiplexing the time-base-compressed audio signal and a video signal, employing the multiplexing control signal, and outputting a video/audio multiplexed signal via a data line. The combination of APA and Matsunaka fails to disclose or suggest these features of claim 2.


As discussed above, APA discloses the signal transmission system including the TMDS encoders/serializers 2601-2603. Further, Matsunaka discloses the transmission section T that is capable of applying time-base compression to the digital audio signal and combine the compressed audio signal with the digital video signal. However, the combination of APA and Matsunaka fails to disclose or suggest the time-base compression means for time-base-compressing an audio signal employing a video sampling clock as discussed above in support of claim 1. Further, the combination fails to disclose or suggest the claim multiplexing control signal generator for generating a multiplexing control signal which provides a no-signal period between the time-base compressed audio signal and a video signal. As a result, claim 2 is also patentable over the combination of APA and Matsunaka.

Because of the above-mentioned distinctions, it is believed clear that claims 1 and 2 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1 and 2. Therefore, it is submitted that claims 1 and 2 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

Hidekazu SUZUKI et al.

By: 
David M. Ovedovitz
Registration No. 45,336
Attorney for Applicants

DMO/jmj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
February 27, 2006